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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,435	03/12/2004	Alexander Tregub	10559-918001	6227

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EXAMINER	
ZACHARIA, RAMSEY E	
ART UNIT	**PAPER NUMBER**
1773	

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/799,435	TREGUB ET AL.	
	Examiner	Art Unit	
	Ramsey Zacharia	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) *1-3* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

2. Claims 1-3 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 20 March 2006.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 6-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection. No support could be found in the application as originally filed for the use of polytetrafluoroethylene as the pellicle polymer. The generic term for Teflon AF is not polytetrafluoroethylene but rather a copolymer of tetrafluoroethylene and 2,2-dimethyl-1,3-dioxole.

5. Claims 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 6 and 8 contain the trademark(s)/trade name(s) "Teflon AF". Where a trademark of trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The scope of the claim is uncertain since a trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademarks/trade names are used to identify/describe a particular polymer and, accordingly, the identification/description is indefinite. This rejection may be overcome by replacing "Teflon AF" with -- a copolymer of tetrafluoroethylene and 2,2-dimethyl-1,3-dioxole--.

7. The phrase "having improved properties" at the end of claim 6 renders claims 6 and 7 indefinite because it is not clear how this improvement is to be measured or determined. Note that claim 8 is not included in this rejection because claim 8 clarifies that the durability is to be improved at 157 nm wavelength when compared to standard PVDF, Teflon AF, or CYTOP.

Claim Rejections - 35 USC § 102

8. Claims 4, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Shirota et al. (U.S. Patent 6,111,062).

Shirota et al. teach a fluorinated polymer that is treated with fluorine to convert unstable hydrogen containing terminal groups to more stable, fluorine containing groups (column 2, lines 25-36). The polymer may be used to form a pellicle film (column 5, lines 35-42). In the embodiment of Example 5, a copolymer of tetrafluoroethylene and perfluoro(2,2-dimethyl-1,3-dioxole), i.e. Teflon AF, is used as the fluorinated polymer (polymer B) that is then subjected to the fluorination process (as carried out in Example 4) to polymer E. That is, polymer E is polymer B subjected to post-formation fluorination.

Regarding claims 13 and 14, the limitations of these claims are taken to be met since at least some of the terminal groups would be expected to be on the surface of the pellicle film.

9. Claims 4, 13, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Sunaga et al. (US 2003/0187168 A1).

Sunaga et al. teach a fluorine-containing cycloolefin polymer that may be used to form a pellicle (paragraph 0001). The polymer may be subjected to fluorine addition after the ring-opening metathesis polymerization process that forms the polymer is completed, i.e. post-formation fluorine addition (paragraph 0030).

Claim Rejections - 35 USC § 103

10. Claims 5-12 and 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shirota et al. (U.S. Patent 6,111,062).

Shirota et al. teach all the limitations of claims 5-12 and 15, as outlined above, except that Shirota et al. do not use ion beam fluorination as their post-fluorination process.

When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the applicant to present evidence from which the examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F. 2d 742, 180 USPQ 324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F. 2d 742, 180 USPQ 324 (CCPA 1974). Furthermore, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113. In this case, the limitation that the technique for increasing fluorine atoms is ion beam fluorination is a product-by-process limitation. The process used by Shirota et al., i.e. dissolving the polymer in a solvent and exposing the solution to fluorine gas, would be expected to not only convert the terminal groups to more stable groups but also fluorinate any hydrogen atoms remaining in the tetrafluoroethylene/perfluoro(2,2-dimethyl-1,3-dioxole) copolymer due to the reactive nature of fluorine gas. Therefore, one would expect the polymer resulting from the

process of Shirota et al. to be the same as that of the instant invention. As such, the burden is on the applicants to conclusively demonstrate that the claimed product differs from that of Shirota et al.

Regarding the improvement of properties recited in claims 6-10, because the improvement of the properties appears to be a function of the increased fluorine content (see paragraph 0018 starting on page 5 of the instant specification), the polymer of Shirota et al. would be expected to also exhibit improved properties.

11. Claims 5, 9-12, and 15 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sunaga et al. (US 2003/0187168 A1).

Sunaga et al. teach all the limitations of claims 5, 9-12 and 15, as outlined above, except that Sunaga et al. do not use ion beam fluorination as their post-fluorination process.

However, Sunaga et al. do teach fluorinating their material after polymerization through the use of fluorine to replace hydrogen atoms in the polymer with fluorine (paragraphs 0325-0333). Because the use of ion beam fluorination represents a product-by-process limitation, the burden is on the applicants (for the reasons outlined above), to conclusively demonstrate that the claimed product differs from that of Sunaga et al.

Regarding the improvement of properties recited in claims 9 and 10, because the improvement of the properties appears to be a function of the increased fluorine content (see paragraph 0018 starting on page 5 of the instant specification), the polymer of Sunaga et al. would be expected to also exhibit improved properties.

Response to Arguments

12. Applicant's arguments filed 05 June 2006 have been fully considered but they are not persuasive.

The applicants argue that neither Shirota et al. nor Sunaga et al. teach treating an already existing polymer. Rather, the applicants argue that the disclosed techniques and examples of the prior art teach forming a complete polymer material with no suggestion of treating the material post formation.

This is not persuasive for the following reasons. Example 5 of Shirota et al. explicitly illustrates treating a preformed polymer to increase the fluorine content of the polymer. Paragraph 0030 of Sunaga explicitly recites that the fluorine-containing cycloolefin polymer of their invention is formed by first subjected a cycloolefin monomer to ring-opening metathesis polymerization and then subjecting the obtained polymer to fluorine addition. In each case, the prior art teaches increasing the fluorine content of an existing polymer.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ramsey Zacharia
Primary Examiner
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